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ABSTRACT

The Internet is a network of networks, sharing the same protocol and linking universities, research communities, businesses, and individuals world wide. In this new global information infrastructure, all citizens need to understand the power and pitfalls of the technology in order to function as responsible members. This paper discusses issues surrounding the Internet involving privacy, copyright and intellectual property rights, electronic speech, and access to the Internet. The Internet allows an unprecedented invasion of personal privacy, which has ramifications for both commercial organizations and individuals. The cyberspace environment allows the free flow of information to all citizens in ways never before possible, however, provides little protection for owners of information who have a right to be compensated and credited for their work. The issues of free speech and access have global implications. All students should have an awareness of the power of the technology and an understanding of how to use it appropriately. (Contains 23 references.) (SWC)

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Ethical Issues Involving the Internet

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The Internet is a network of networks, sharing the same protocol and linking universities, research communities, businesses and individuals world wide. It encompasses virtually all means of communication except direct touch; it is not the post office or the television or the telephone, but somehow all of these and more. All students, technical or not, are and will be net citizens. Are they prepared to be good net citizens? Do our facilities, policies, courses and vehicles for learning outside the classroom foster good citizenship? Do we give the non technical students a way of evaluating this resource? Do we enable them to learn how to use the Internet in appropriate ways or do we assume that they will just pick it up on the fly? This paper will make the case that there are serious issues involving privacy, intellectual property rights, electronic speech and access which can not be left to chance. In this new global information infrastructure, all citizens need to understand the power and pitfalls of the technology in order to function as responsible members.

The Internet allows an unprecedented invasion of personal privacy, i.e. control over how much and what kind of information about oneself is given to others.[1, 97] Certainly new technology in the past has also threatened personal privacy, but never with the same power. Now, personal information can be broadcast widely at great speed. It is true that television can reach at least as many people, but television provides only one way communication. Telephones provide speed, but the communication is one-to-one. The Internet can also provide anonymity, making it difficult to develop a trusting relation with the entity with which information is shared. Since our traditional notions of privacy are based on the physical world, the cyberspace environment in which information can be reproduced and transmitted without the knowledge of the holder of the information is particularly troubling. [2,60]

Let us view the problem through the eyes of a commercial concern using the Internet for business and then through the eyes of an individual who visits the commercial concern's site on the Internet. A commercial concern typically targets its advertising to those it feels are potential customers; the cost of the advertising must be offset by the increase in sales resulting form the advertising. Current technology allows an organization to gather all kinds of information about its online customers, so inexpensively that cost is hardly a factor. Some of this information consists of expressed preferences or actual requests for information; an individual is obviously aware that he or she is providing this information. But a great deal can be learned from recording the behavior of the individual as he or she visits the site; the individual may have no idea that pages visited or time spent on a particular page is being recorded, yet, over time, this kind of information could build a fairly accurate picture of a customer. With this profile, the commercial concern could then engage in push marketing, sending customized advertising to its potential customers, customized even to the point of organizing the site to match the interests of the customer. It should be pointed out that

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many customers might appreciate the fact that information is tailored to their interests, as opposed to just receiving generic advertising. The commercial concern could, of course, sell its customer profiles to other companies, a practice which certainly predates the Internet. The problem is that the generic sending of advertising to a list of lists (or spamming) , which is easy to do, not only results in invasions of privacy but in fact threatens the Internet itself. Jill Lesser, Deputy Director, Law and Public Policy, America Online, speaking at the Computers, Freedom and Privacy '97 conference in March, 1997, estimated that 50% of the weekly traffic on America Online was of this nature before screening to prevent spamming was put in place.[3] Needless to say, AOL customers were not happy.

Now what about the concerns of the individual accessing the site? Consider the ways in which people do business off the Internet. Many still prefer the anonymity allowed by paying in cash, thereby not releasing any information about themselves to the commercial concern. Even if they are willing to supply some information in order to complete a transaction, they certainly do not expect to be followed while browsing in a store, particularly not by someone who records their every move. But this is exactly what might happen to Internet shoppers. Hence the Internet presents us with a big dilemma: a wonderful way to customize the satisfaction of a customer's needs and a powerful way to violate a customer's privacy. Of central concern is whether to offer an individual an opt in plan, where permission must be sought before any information gathering takes place, or an opt out plan, in which an individual must take the initiative to stop the information gathering or passing.[4]

Are people genuinely concerned about this privacy invasion? The Graphics, Visualization and Usability Center in the College of Computing at Georgia Institute of Technology completed its fifth WWW user survey in April, 1996. This is the largest web based survey both in terms of the number of responses collected and the number of questions asked. The scale used was 1 (strongly disagree) to 5 (strongly agree). Most respondents strongly agreed (4.6/5.0) that they valued being able to visit sites on the Internet anonymously. Respondents also agreed (4.4/5.0) that users ought to have complete control over which sites get demographic data. Respondents, however, indicated a willingness (78.5%) to supply demographic data if they were told ahead of time how that information would be used. They did not feel that content providers have the right to resell information about its users to other companies. Most (4.0/5.0) did recognize a role for advertising supported content. [5]

In an earlier survey conducted by Louis Harris and Associates for Privacy and American Business in 1994, entitled Interactive Service, Consumers and Privacy, 76% of respondents felt that businesses ask consumers for too much personal information. Fifty two percent expressed interest in participating in subscriber profiling and receiving advertising and information about products matching their interests, but 60% said it would be very important to be fully informed about the collection of profile information and how it would be used before deciding to subscribe (a definite opt in desire). Forty nine percent considered it very important to be able to review the information in their subscriber profile and correct any errors. The accuracy problem addressed by this last question is indeed a serious issue. How can an individual know if the information kept about himself/herself is accurate if he/she does not even know if the information is being collected or where it is? Even if initial information is accurate, how will it be kept up to date? In this same survey, 73% said they would rather see companies and industry associations voluntarily provide

privacy policies as opposed to having these policies imposed by government regulation. [6,39-40]

Is it possible or likely that companies or industry associations could produce privacy policies which would provide adequate protection for individuals and would be fully implemented? What is adequate protection? After all, the opt in strategy is just fine for individuals, but opt out is much easier for commercial concerns. Certainly individuals should expect to be informed about the privacy and security consequences of an online transaction before entering into one, and they should expect appropriate security to be used. Different privacy standards might be needed in different contexts. The eTRUST project is a promising way to promote privacy policies. This program, started originally by the executive director of the Electronic Frontier Foundation and the founder of Portland Software, a provider of secure technology for Internet transactions, is scheduled to be launched in 1997. Those sites following key principles designed to protect the privacy rights of consumers could display an eTRUST "seal of approval" on their site.[7,38] It is unlikely that all privacy protection will come from the private sector, in part because there are international considerations due to the global nature of the Internet. Many countries have already enacted privacy law or developed enforceable privacy standards. If the United States does not develop appropriate safeguards, businesses in the United States may be disadvantaged and individuals may find that they receive less protection in the United States than elsewhere.[8]

Although the discussion here has focussed on an individual doing business with a commercial concern in cyberspace, personal privacy is a big issue even if an individual never opted to conduct business on line. For example, balancing the desire to keep computerized medical records private against the desire to make them accessible to those who legitimately need access is a major dilemma. [9, A19]

Fortunately there are several organizations working on privacy issues. The Electronic Privacy Information Center (EPIC) was formed in 1994 to focus attention on privacy issues. Privacy International is an international human rights group founded in 1990. Computer Professionals for Social Responsibility (CPSR) is an organization of people concerned about the impact of technology on society. The Electronic Frontier Foundation, begun in 1990, works actively on privacy issues. [10]

What advice can we give to the student enjoying the Internet? The best privacy protection certainly comes from not giving out information in the first place. Encourage students not to fill their home pages with information that is best not broadcast to the world. When dealing with a commercial site, understand the privacy policy before providing information. Understand the difficulties if a site operates with opt out policies rather than opt in policies. Question why the information requested is needed and what benefit you will receive for providing the information. Weigh the request against the benefit. Many people blindly fill in online information requests without thinking. Remember that personal information is valuable; if it were not, why would someone else want it?

The Internet is an incredible source of information of all kinds; it enables a free flow of information to all citizens of cyberspace in ways never before possible. However, owners of information (authors, artists, designers, etc.) have a right to be compensated for their work; indeed without any system to protect owners' rights, it would be hard to encourage such people to produce

their work. Copyright law has supplied this system in the past, but the new medium of the Internet raises interesting questions. How can we balance the rights of multimedia developers to use older works against the rights of copyright owners to be paid when their works are used? Are online services responsible when copyright infringement takes place? What is an infringing copy? Is this copy framework even a reasonable way to handle intellectual property rights in an electronic medium?[11,167] Although copyright issues may often be central in a discussion of intellectual property rights, in the development of web sites patent and trademark issues as well as licenses can also be important concerns. Any individual can be both a developer, with the need to pay attention to copyrights on material to be used, and an user, who may wish to download copyrighted material.

First, a bit of background is helpful. Copyright laws refer to original works that have been fixed in a tangible medium of expression. The laws are based on the power given to Congress in the United States Constitution to promote arts and science by granting exclusive rights for a limited time to authors for their writings.[12,751] Different rights apply to different categories of work, i.e. the way a literary work is treated differs from the way a sound recording is treated. The copyright protection is held by the person who can claim to be the origin of the expressed work. When another individual takes an original work and creatively selects or arranges it in a new way, interpretation of the law becomes more complicated. Under the law, authors have the right to reproduce the work in copies, prepare derivative works, and distribute copies. Since the reason behind copyright laws is supposed to be the promotion of arts and science, there are fair use restrictions which allow educational institutions and researchers to make limited copies of works which otherwise are covered by copyright law. But what are copies when the work is accessed on the Internet? Is the temporary copy made in RAM when a site is down loaded considered "fixed in some medium"? Are digital transmissions copies? Usually the first sale of a copy removes the right of the owner of the work to control further distribution of that copy. If I buy a book I am free to give it to a friend, but then, of course, I do not have the book myself. In digital works, if I make a copy to send to a friend, I still have the original copy. Hence it could be argued that unless you delete the first copy, first sale rights do not apply. The situation becomes even more interesting when copyright laws of other nations are factored in; after all the Internet is global in nature,. Currently European law grants rights to authors for a longer period of time than was the case in the past. Hence works which were in the public domain are now back under copyright protection. Despite the questions, copyright law is being applied to the Internet. Developers must take copyright law into consideration.[13]

The debate will surely go on, even as the current law is being applied. Several groups have strong interest in the copyright debate: the information industry, worried about copyright piracy in the digital environment; academia, anxious to preserve fair use; libraries, very dependent on the first sale part of copyright law; service providers, who do not want to be liable for subscribers' transgressions. There are two coalitions particularly active in the debate. The Creative Incentive Coalition represents publishers and others who distribute copyrighted works. The Digital Future Coalition is a group of many organizations, including the American Library Association, the National Education Association, the Electronic Frontier Foundation and the Electronic Privacy Information Center. [14,1] Where does this leave the average student or net citizen? Currently, such a person must be aware of the copyright law and must act accordingly when, for example, developing a web site. Although most people are accustomed to thinking about this issue when they are tempted to use another's text, the same issues apply when using another's graphics. Even if fair use is claimed for a noncommercial site, the developer must still evaluate how much is borrowed.

how accessible the site will be, and the potential harm to the market value of the borrowed work. As we turn our students loose to develop home pages, we had better make them aware that it is usually not legal just to grab someone else's graphics. Rather, emphasize original works and permission for those works which are not original.

Today, students seem to visit computers to check their e-mail almost more frequently than they check their post office boxes. Students and non students alike have found that e-mail, chat rooms and newsgroups enable them to say and hear whatever they want. Any individual can easily establish a presence on the web and publish a statement which is transmitted globally. No more passing out pamphlets to get one's views to the public. But when the electronic speech becomes extremely offensive to some, we can expect to hear about it. Remember that issues of free speech are never debated over motherhood and apple pie. As Mike Godwin of the Electronic Frontier Foundation said at the 1997 Conference on Computers Freedom and Privacy, "Speech matters. That is why it is worth protecting." Questions about free speech can not be answered without considering the first amendment to the U. S. Constitution. "Congress shall make no law ... abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble..."[15,758] Recall that the fourteenth amendment essentially does not allow a state to abridge these freedoms. But not all speech is protected; perjury, for example, is not protected by the first amendment. Neither is speech which is directed to inciting imminent lawless action and likely to produce such action, as was established in Brandenburg v. Ohio (1969).[16, 7] Problems come when the first amendment must be interpreted in the light of new media, such as electronic speech. One must be careful not to assume that free speech is adequately protected because it is protected in standard media; this kind of thinking can lead to free speech restrictions any time a new media appears. An important part of the first amendment is the right to peaceably assemble; surely the Internet gives us a new way in which to do this.[17] So when is it that this is going to be a problem for individuals using the Internet? Surely, regulators and legislators will want to jump in when constituents become vocal about really offensive speech posted in newsgroups or elsewhere on the net.

A case in point is the Communications Decency Act. Congress became concerned with the direct negative effects on children of sexually explicit materials available on the Internet. This material is put on the Internet both by commercial pornographers and individuals. Members of Congress were also concerned that parents would be deterred from the educational benefits of the Internet by the presence of such material. Hence the Communications Decency Act was passed in February, 1996. Basically the act has three provisions. The first is the transmission provision which makes it a criminal offense to knowingly create and initiate the transmission of indecent material, knowing that the recipient is under 18 years of age. The second provision is the specific child provision which makes it a criminal offense to use an interactive computer service to send to anyone under 18 any communication that describes sexual or excretory activities in terms which are patently offensive to contemporary community standards. The third provision is the display provision which makes it a criminal offense to use an interactive computer service to display patently offensive sexual material in a manner available to anyone under 18 years of age. The Act establishes a defense if the provider restricts access by requiring use of something which verifies the age of the recipient, for example, a credit card or adult personal identification number. The day the Act was signed into law, it was challenged by the ACLU in the U.S. District Court for the Eastern District of Pennsylvania on constitutional grounds. A temporary restraining order was issued. Other organizations filed their own constitutional challenges, and the suits were consolidated. All three judges hearing the case

agreed that the statute violated the first amendment. Two judges also concluded that critical provisions were unconstitutionally vague. All three agreed that the Act should be preliminarily enjoined. The government appealed to the Supreme Court, which heard arguments on March 19, 1997. The attorney general had previously announced an interpretation which would have it apply only to commercial pornographers.

The arguments in favor of the CDA can be summarized as follows. The CDA is a zoning ordinance for the Internet, similar to standard speech related municipal zoning ordinances which, for example, keep adult movie theaters away from residential areas or restrict broadcasting of indecent material during certain times of the day when young people are likely to be listening, ruled justifiable by the Court in the Federal Communications Commission v. Pacifica Foundation case in 1978. The Pacifica case was not an outright ban, but rather zoning in support of the well being of children. Also, the filtering (to verify the age of the recipient) required by the CDA puts less burden on adults than other types of zoning. Without the protections of the CDA, many parents will not be willing to allow use of the Internet in their homes, thus depriving children of the benefits of the Internet and weakening the Internet overall due to the smaller number of participants. Services do exist which can handle the adult verification requirement. Also, the CDA utilizes the least restrictive means to accomplish keeping indecent material from minors, means far less burdensome and more effective than those found acceptable in other zoning cases. Screening software which parents could use is not capable of identifying and screening all indecent material.[18]

The arguments against the CDA can be summarized as follows. Indecent speech (as opposed to obscenity or child pornography) is protected speech under the first amendment and can therefore be restricted only in a narrowly defined context when there is a compelling state interest. The Internet is a medium which involves so many forms of human communication that a narrowly defined context, such as those used in broadcasting or dial-a-porn, is not possible to achieve. Judge Sloviter, writing in the District Court decision, concluded that Internet communication was unique, but more akin to telephone communication than to broadcasting. The community standards test is not applicable when using the Internet, which has no boundaries. It would be impossible for someone to know whether or not he or she was breaking the law due to the large number of very different communities linked by the Internet. A prudent person would avoid the Internet altogether, thus having a chilling effect on free speech. The state does have a compelling interest in protecting children, but there are already narrowly defined statues which do this. The CDA is so broadly drafted that legitimate material such as art work or information on AIDS is likely to be restricted. As Justice Breyer pointed out during the Supreme Court arguments, two high school students could violate the CDA by discussing their sexual exploits on line. There are better ways for parents to control the sites their children access; for example, the PICS (Platform for Internet Content Selection) program would allow parents to decide what is best for their children. The validity of the CDA can not stand on the decision of one attorney general about how it will be enforced; if it did, the validity of the law could change with a change in the attorney general.[19] When giving the keynote speech at Computers Freedom and Privacy '97 on March 12, 1997, Ira Magaziner, Senior Advisor to the President for Policy Development, gave his personal opinion that if a bill similar to the CDA were passed, it should be vetoed.

The Supreme Court is expected to issue its decision on the CDA early in the summer of 1997. No matter what decision is reached, the issue of appropriate speech on the Internet will be debated

for some time to come. What advice or guidelines can we give to students so that they will be good citizens in this area? Perhaps the same kind of advice we might give for any kind of discourse is appropriate; respect the views of others, even when you do not agree. Preserve your right to disagree by doing so in well crafted arguments. The practice of "flaming" does not usually win supporters to your cause, but logical discussion based on fact is likely to sway opinion. Use the Internet in ways which will allow everyone to participate; be sure to be a listener as well as a speaker. In fact the Internet is a powerful medium which enables some people to find a voice they never had before. Severely handicapped people who may not be able to speak are now able to participate. Good net citizens will participate in ways which encourage the global exchange of information and opinions while respecting the rights of all citizens.

The global nature of the Internet becomes ever more valuable as more and more people have access to the Internet. Access is an issue within the United States as well as being a global issue. Consider for a moment the current users of the Internet; commercial enterprises, colleges and universities, libraries, government agencies, individuals. All the users listed have the hardware and software necessary as well as enough technical expertise to use it. It is clear that there are many within the United States who do not fall into this category and will be seriously disadvantaged as use of the Internet expands, particularly into commercial areas. Part of a solution could be found by looking at how access to information has been achieved in the past. The great strength of the public library system has been its mission to deliver information in useable form to any and all citizens. Several features of a public library combine to make it effective; it is free, it is a public, physical space, it enables individuals to find needed information, and extensive information is available. The Internet could do much of this, but some of the copyright questions raised above will have to be resolved. Certainly we need public store houses of knowledge now more than ever, and we need to make that knowledge accessible to all.[20,62] Since public libraries already have the physical space, it seems that a reasonable starting point is to put free Internet access into those libraries. In fact, libraries which have already done so have found enthusiastic response from the public. The public library in South Bend, Indiana, was one of the first public libraries to offer free Internet access; over the last couple of years it has greatly expanded the number of stations available. In addition, the library offers a variety of training sessions. San Francisco's public library had no trouble rasing funds for its new high tech library. The demand has greatly exceeded expectations; designed to hold 5000 people, the daily average is about 6000 people.[21,20-21] Libraries, however, will not solve all the access problems. The Internet community will need to find a variety of ways in which to provide access to those who can not easily access this medium.

The Internet, however, is a global network; hence questions of access beyond the United States need to be addressed. Certainly incompatibilities in technical standards among nations need to be resolved, but that is probably the easiest part of the problem. Different political, social and economic traditions lead to different information policies; not all governments want to encourage the free flow of information. Simply enabling the free flow of information does not cause the free flow of information.[22,66-67] There are no easy answers here, but good net citizens will have to have a global view of their world. As our students move to the world beyond graduation, we hope that they will be concerned about providing others the kind of access to the Internet that they enjoy.

Having established that privacy in this electronic world, copyright law as applied to digital information, electronic speech and access to the Internet all are areas in which there are many

questions yet to be answered, how do we prepare that good net citizen? First by making sure that students think a bit about these issues at the same time they are learning to use the technology. Knowledge and responsibility come coupled together. We need to be sure that all students, no matter what their majors, have an awareness of the power of the technology they use and an understanding of how to use it appropriately. All students are more than eager to get their e-mail addresses as soon as they arrive on campus; that eagerness provides a golden opportunity for some quick education on appropriate uses and guidelines. Further discussion of the issues raised in this paper might take place during an orientation to information technology or as part of a project in a general studies curriculum. The College of General Studies at Boston University used the theme "The Information Revolution" for its Capstone 1997 project. In the introduction provided to the students, all major issues were addressed, allowing students to be exposed to the important problems and to pick one for an in depth project.[23] However, it is equally important that we not make the mistake of assuming that the technical student will somehow just know how to be a good net citizen. Indeed, such students are often more able to abuse technology because of their technical knowledge. These issues must be raised in the appropriate places in the technical curriculum. However the Internet may change in the future, the need for good citizenship on the part of all users will remain.

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